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THE JOURNAL OF PHILOSOPHY

PSYCHOLOGY AND SCIENTIFIC METHODS

HOW IDEAS "WORK"¹

WHEN true ideas were said to be the ideas which "work," the loose and very general phrase "which work," taken out of its connections, was an easy mark for the critic, who lost no time in reminding us that false ideas seem to be as industrious as true ones, that error gets up as early and stays up as late as truth, and often appears to work overtime.

But the pragmatist hastened to point out that these shafts lose most of their point and force as soon as the phrase is put back into its context, where it clearly means "which work in the way they set out to work." The idea of an ache as the ache of a certain tooth is true, if an operation on the tooth alters the ache. If "pulling" the tooth does not stop the ache, the idea is not true, even though it bring some other, and possibly greater, satisfaction, *e. g.*, the restoration of eyesight. If Saul goes to seek asses and finds a kingdom, while the kingdom may be a very satisfactory substitute for the asses, it does not make the idea of the whereabouts of the asses true. The idea is a proposed connection of things for a specific end, and is true when it works in the way proposed. But it is important, says the pragmatist, to keep in mind that the proposed working means in the end, control of the original experience which is the "subject" of the idea. If having an idea of a thing means only the possession of some sort of a psychical symbol for it, why should there ever be any failure? Anything will do for a symbol. Every idea would work. There could be no error.

The critic next propounds what he regards as a far more crucial question, namely: "Are ideas true because they work, or do they work because they are true?" Must not the ache be related and connected, *realiter*, with the tooth in advance of the idea of this connection, in order that the idea may work successfully and so be true? Is not therefore the entire preceding account of the idea of

¹The contents of this paper form a chapter in a forthcoming volume on "Pragmatism and its Critics," published by the University of Chicago Press.

the ache, as an act of connecting the ache with the tooth, up-side-down in so far as it speaks of the idea as if it were *making* a connection? Is not this connection simply *found*, and are we not therefore thrown back again upon the strictly representative function of the idea?

This objection is credited as the special contribution of the "neo-realist" critic who defends the thesis that *thinking makes no "essential" difference to the things thought of or about*. Verily it is not politics only that makes strange bed fellows. Here, in the face of his tradition of the "active" character of thought, of the essence of thinking as consisting in a relating activity, the absolute idealist joins with the realist in maintaining, against the pragmatist, that our ideas can only *find*, not *make*, connections between the ache and the tooth. The "active," "relating," "connecting," "constitutive" character of thought, of which historic idealism makes so much, applies in the end only to the ideas of the absolute, not to ours. In its conception of finite thought, absolute idealism is as realistic as any arch-realist could demand, and as it is precisely finite thought that is under discussion, the absolutist finds himself shoulder to shoulder with the realist against the pragmatic contention that finite thought, *our* thought, makes a difference in the "things thought of."

Returning to our particular case, suppose we agree that there exists a connection, objective and *realiter*, between the ache and the tooth *before* there is an idea. It surely does not follow that this connection must remain the same *after* the idea arises, or that *all* the idea can do or aims to do is algebraically to symbolize this connection. Nor does it follow, as some critics have assumed, that, if the situation is objectively altered in and through the act of ideation, the idea is therefore the creator of *all* the connection there is, and even of the "things themselves."

But, says the realistic-idealistic critic, we admit that ideas make a difference. They make just the difference of the *addition* of thought. The ache and tooth are now objects of thought, whereas before they were not; but the only difference is just this *addition* of ideas to the situation.

But, returns the pragmatist, if thought is something merely added to the situation, without making any "essential" alteration, (1) why is it added? (2) *How are we to tell whether it is rightfully or wrongfully, i. e., truly or falsely, added?* (3) If the ideation of the ache as toothache is merely an addition of a factor which makes no "essential" difference in the situation, again, why not refer the ache to the phase of the moon, the day of the week, or anything else we may fancy?

Let us consider further the situation before and after the idea.

We have agreed that before the idea the tooth and the ache are "objectively" connected. Indeed, in one sense there is too much connection: they are so merged that mutual reference and mutual control are impossible. What is needed is a certain amount of disconnection, of disentanglement, and of rearticulation. If we wish to say that before the idea the tooth is the "cause" of the ache, after the idea it certainly is something more. The moment the pain is referred to the tooth, the tooth ceases to be *merely* the cause of the pain. Indeed, it then *begins* to cease being the cause of the pain. It now *begins* to be the cause of the pain's cessation. From being a mere condition of the pain, it *begins* to be through the ideating process a condition of not-pain. As Hegel would say, it is now *aufgehoben*, and passes into its opposite. Here, indeed, is the source of Hegel's riotous dialectic, but here also is the principle for the control of that riot. For Hegel, this passing of a thing over into "its other" is just a peculiar and ultimate effect of thinking. Think about anything, and, presto! it begins to become something else. And so it does. This, indeed, is just the pragmatic thesis. But *what* it becomes depends on the problem and interest. Let us suppose there were no desire to get rid of the pain, and that in some way—as an act of an "ideational instinct"—the pain should be connected with the tooth. What transformation of the tooth or the pain would there be? Nothing would be *aufgehoben* in this case. The whole "dialectic" would be stopped in its tracks. Is it not clear that the reason that there is a dialectic of thought is because at bottom *thought is a part of the total process of an efficient desire and effort to effect a change in experienced values?*

But our realistic critic will still insist that this reference of the pain to the tooth is not the "real" beginning of a *new* interaction between the tooth and the ache. It is just a *preliminary*, a getting ready for the beginning of such an interaction.² The tooth doesn't "really" take on any new relation to the ache until the dentist gets hold of it. But how does the dentist come to get hold of it? Is it not precisely because the tooth has been actually operating as a guide to both the patient and the dentist from the moment the pain is ideated as the pain of a tooth?

But what now, says the critic, of the case in which the pain is referred to the *wrong* tooth, or to the ear, or a demon, instead of to the right tooth? Is this, too, a "real" and objective transformation of a "real" situation? Verily, rejoins the prag-

²The question of where a beginning begins should have no terrors for the pragmatist. Greek discussion showed once for all that the only method for the solution of that and all other questions of the kind is the "teleological," i. e., the "practical" one.

matist. Is not an act which culminates in "pulling" the wrong tooth, or the treatment of the ear instead of the truth, or in making a libation instead of a potation, a very "real" alteration of a very "real" situation?

But, rejoins the critic, the pain after all *doesn't* belong to the other tooth, nor to the ear, nor to a demon, and *does* continue to belong to "its" tooth after the idea, whether true or mistaken, as before. If this were the case, rejoins the pragmatist, it would not be to the point, which is not that nothing remains after the idea, as it was before, but that the idea marks the initiation of a *new* connection between things, which, if it occurs through an idea, is none the less real. As a matter of fact, after the ideation the ache not only "belongs" to the tooth as it did before, but through its reference to the tooth, by the idea, whether this be true or false, it is put into connection with other agencies such as the dentist, or a potation, or a libation, etc.

Nor does the fact that the new relation and interconnection may be false or wrong, *i. e.*, not effective for removing or altering the ache, make it any the less "real." Once more, the "pulling" of the wrong tooth is certainly no less "objective" than "pulling" the right one. In short, error, says the pragmatist, is just as strong a witness as truth for the contention that thinking is a process in which things enter into new and "real" interaction.³

To the question, What of the madman's ideas? the pragmatist says that the guards, the barred cells, the taxes ought to be a sufficient answer. If a madman thinks you are his enemy and therefore to be destroyed, you will scarcely feel safe on being told that you are "really" not his enemy and that his idea is false. And, to be sure, safety does not arrive *merely* by thinking of having the madman shut up, but it *starts* with some such idea.

Another way of stating the source of the difficulties in the realist's position, says the pragmatist, is that the realist thinks of the situation which precedes and leads up to thinking, wholly in existential terms. He omits the elements of motion, of impulse, and of desire in it. Thus in the instance cited he thinks of the "real" situation preceding thought as made up of the "fact" of the pain, the "fact" that, entirely independent of any ideas, it is already connected with a certain organ; and, if we extend the boundaries of the

³ If any one complains that the toothache case is one which offers the least resistance to the pragmatist's interpretation since in it the thinker is the one who has the pain, the pragmatist will reply: (1) that "the toothache case" is not of his own choosing, but one selected by the critics as a "poser" for pragmatists; and (2) that in principle it makes no difference whether the pain is "in the same head" with the idea or another.

case a little, the "fact" that the physician is in a certain place whatever the patient's or anybody's else ideas about his location may be. This, with as much more of detail as one wishes, is the objective "real" situation which it is the business of thought merely to represent or point at.

But this is a very incomplete statement of the *whole* situation. First, there is the *desire to get rid of the ache*. It is this desire indeed that develops into ideas of the location of the ache and the physician. These ideas are but this desire getting into definite, efficient working form. And, as we have seen, this stops with no mere process of algebraic symbolization. The idea of the ache is of it as a "toothache" or "earache," or ache to be cured by the physician and of the physician as the curer of the ache.

Further, there is the "fact" that, however certain, definite, and complete may be the physician's location from the standpoint of those to whom the finding of the physician is no problem, it is no less a "fact" from the standpoint of the patient that his location is "uncertain" and "indeterminate." And if the patient's standpoint is as important in the situation as the physician's—and it would be hard to convince the patient that it isn't—what right have we to state the fact of the physician's location *entirely* from the standpoint of those who happen to be in an unproblematic space relation to him and call his location fully and completely determined, when for the patient and perhaps for many others it simply is not? Isn't this sheer superstition? Whatever the physician's space situation, it is "such that," to use a favorite phrase of the mathematician, although it may be determined for A, it is just *as* undetermined for B.

Here we shall doubtless be told that this problem of "location" is a *space* problem, and that space relations at all events are not dependent on ideas—that the space relations of the patient and physician are perfectly definite and determinate and wholly independent of the "aches" and "wants" and "ideas" of either the patient or the physician; that an object in space can not be both determinate and indeterminate, or determined on one side and not determined on the other. Surely it will be said, it is just the essence of the space world to be completely defined; every object in space must be in a perfectly definite and determinate relation to every other, entirely independent of wants and ideas. And this suggests that this conception of space may be the prototype, not to say parent, of the whole realistic conception of "independence." The realist does not, to be sure, speak of his world of "independent things" explicitly in terms of space relations, but the problems it presents are so homologous to those of space that it suggests a close kinship.

First, we should observe that for the mathematician this con-

ception of complete and independent determination of the space relations of objects applies not to such "objects" as a person with a pain or a physician seeking patients. The only "object" whose location for the mathematician is so completely determined is just a *point* of space itself, not an object *in* space. The moment we apply this complete determination to an object *in* space we land at once in the Eleatic's motionless world and have on our hands all of Zeno's puzzles. The conception of complete spatial determination will not apply to a *moving* object. A moving object is *as much* undetermined as determined. Any attempt to include motion itself in the complete determination reduces it to space, for in the conception of completely determined motion, all possible motions must already have taken place; all aching teeth must have been eternally "pulled."

The objector will doubtless admit that there is the pain of the patient and his uncertainty of the whereabouts of the dentist, but these—well, they just belong to *him*, not to the real and objective situation. In short, the location of the physician *as a physician*, in Plato's phrase, not a mere "point" in space, depends in the last analysis upon his *operative* relations to the patient; and uncertainty and ambiguity in this relation—no matter how unambiguous may be the relations of points in abstract space, and no matter whether the ambiguity is at the patient's or physician's end of the relation or both—are the "real" character of the situation to be overcome with the help of ideas, if so be.⁴

No doubt the realist will still insist that this ambiguity and indeterminateness of the physician's location is all in the patient's "mind," not in the world of "things," but the pragmatist persists (and here he would side with the idealist, *if* the idealist would only include *our* ideas in his idealism) that this indeterminateness and uncertainty of mind is an indeterminateness in the "real" *operative* (not the abstractly spatial) relations of things. The location of the physician as a physician—not as a point in space—is determined surely by the part he can play in altering aches and pains. Space is not something *in* which the physician merely is; it is a relation in and through which he *operates*. Take away this element of operation and there is nothing left with which to determine either distance or direction. The final test, as it is the final source of all determinations of space and motion, is the capacity for the maintenance or alteration of such values as our long-suffering and suffered toothache, the sound of a symphony, the imagery of a poem, the love of a friend, etc.

⁴ Of course, no situation is *wholly* indeterminate; the ache is already defined as the "ache of the tooth *or* of the ear," and the physician as "somewhere in town," etc.

But the difficulty which the realistic critic regards as the most crucial for the pragmatist's thesis—that thinking is a perfectly continuous part of the real interaction of things—is knowledge of the past. However it may be with present and future things, the past surely undergoes no alteration in “being known.” It can only be represented, symbolized, pointed at. “What’s done’s done.” “Banquo’s dead and can not come out on’s grave.” Yet what shall we say of Macbeth’s miserable cry, “If ’twere done when ’tis done,” and of Brutus’s “Thou art mighty yet.” Are they after all “mere rhetoric”?

In general it is difficult for the pragmatist to see how pastness can be a special or specially difficult case of knowledge since from his standpoint it is involved in *every* act of thinking. For him thinking is just a process in which “things” produced in the past recombine or interact to produce new “things.” It is to be noticed that the crucialness of these cases of the past seems to be greater in proportion to the amount of the pastness. Hence we find the instances usually selected from the remote past; “Cæsar’s passage of the Rubicon,” and “The discovery of America” are the well-worn citations. And yet perhaps some who would at first be disposed to agree with the realist that our knowledge of Cæsar’s passage of the Rubicon makes no difference in it *now*, might hesitate to say that its “being known” by the Senate and populace of Rome, and its being expected by Cæsar to be so known made no essential difference in it then. But in principle the case is the same, whether the pastness be a second or a century. To be sure, the present operations of Cæsar’s act through acts of knowledge are doubtless less extensive and important than they were 50 B.C. But whatever the character of its operations, even if they are confined to the second-year of high school, the method of operation, that is, through the process of knowledge, is still the same. And it would not seem to be a great strain upon the imagination to think that a man of affairs in time of a crisis might still be influenced by Cæsar’s example. But whatever the extent or the nature of the operation as a matter of fact may be, Cæsar’s act, like John Brown’s soul, goes marching on. Like all other “historic” acts, it is not yet finished, and never will be so long as it continues *through* acts of knowledge to produce new results.

Let it be remembered, insists the pragmatist, that this doctrine of the real efficiency of thought does not teach that thinking undoes or reverses or blots out any thing or event that has happened. It insists only that in becoming known or entering into knowledge a past act is altered in the sense that it takes on additional functions and consequences.

This last statement will doubtless suggest to the realist (1) that the pragmatist is entirely overlooking the distinction between a thing or an act and its "consequences"; that being known does not add anything to the past act itself, but only to its *results*: (2) the thing or act must *first* be "known" before the "real consequences" can occur, in so far as they occur through knowledge.

The first point precipitates the ancient "metaphysical puzzle" of the possibility of separating a thing from its effects, its is-ness from its does-ness. It is the old problem of the thing-in-itself. The realist's objection implies that the line between a thing and its consequences can be drawn ontologically and existentially, and is a fixed one. Yet when we apply this distinction to a specific case we are forced to make it a "working," not a metaphysical one. That is, we find that its location varies with our problem. Where, for instance, are we to draw the line between the "thing" typhoid fever, and its "effects"?

This of course does not mean that the making of this distinction is a matter of the arbitrary whim of the moment, as some have imagined. It means only that it shifts with the analysis and development of the problem. Nor must this "functional" interpretation of the distinction, as it often is, be considered as an attempt to abate or cheapen its importance and reality. It intends only to state in *what* this importance and reality consist.

However, the essence of the pragmatic view does not depend on this distinction. Whether we say the change is in the "thing" or "event" or only in its "consequences," the pragmatist's contention is that this change actually begins in the act of thinking. And this brings us to our critic's second point, namely: Granting that things and events acquire new consequences or new functions as a result of acts of knowledge, yet even so they must be known *before* these new consequences or functions can begin. The general form of the problem here is the same as in the first point, viz., the problem of introducing an ontological separation into a continuous process without destroying continuity. If by first being known is meant that the thing or event enters into a relationship of a "unique" self-contained character called "knowledge," and is not even the beginning of the process of "real interaction," then we must ask, When does this "real interaction" begin? If the interaction "depends" upon knowledge and yet is no *part* of it, how then is this state of just "knowing" or "meaning" or "pointing at" a thing transformed into "real interaction." Psychologically it is the old question of the connection between cognition and will. *If knowing is so qualitatively and functionally different from alterative action, how do we make the transition from it to efficient action?*

These are some of the questions⁵ which the realistic critics have not yet met, and it is the pragmatists' belief that when we come to deal in detail with these questions, we are forced to transform "representative" into "operative" realism.

For the pragmatist, knowledge is the beginning of new interactions or, if we prefer, of new "consequences." But the beginning of a *new* interaction is always to *some* extent ambiguous and confused. This first stage of new activity, therefore, is occupied with getting rid of this confusion and this process the pragmatist calls "thinking." On this view we do not have to jump out of a unique and separate and self-sufficient state of knowing into "real" activity. The knowing is our desire, our will, our "practical" interests getting out of ambiguity and confusion into order and efficiency. If, as a matter of terminology, we wish to say that the "real" interactions and the "real" consequences do not begin until after this confusion is cleared up, then we may say that the thing must *first* be known before, or in order that, "real" consequences may occur. But the process is a *continuous* one; it is all of a piece; it is not split into parallel strands of "thought" and "will."

Concerning the way ideas work, the case between the pragmatist, the realist, and the idealist stands thus:

The pragmatist agrees with the realist (1) that the "world" or "experience" (the term does not matter here) does not consist of "a system of ideas"; (2) that ideas do not aim or "desire" to absorb, or be absorbed by, the rest of the "world" or "experience"; (3) that at any given time some of the world (or experience) may be "independent" of knowledge in the sense that it is not then "being known," that is, it is not in the knowledge mode or stage or action. But at the next step, where the "unknown" part of the world (or experience) passes into knowledge, the pragmatist and realist part company. For the realist this passage occurs with no "essential" alteration in the material which enters into knowledge; while the pragmatist believes knowing to be a part of the process in which the world of "things" or "events" or "experience" brings forth new "things" or "events" or "experience."

Between pragmatism and idealism there would be a vital point of agreement in the conception of the "active," "constitutive" character of thinking if it did not turn out that for most idealists this character does not belong to "our" thinking, but only to the absolute thought. Here the pragmatist declares that the idealist's faith in

⁵ For additional questions and a searching analysis of the realistic position, read Schiller's discussion of Nunn's paper on "The Independence of Secondary Qualities in Perception," in the current volume of the *Proceedings of the Aristotelian Society*.

the fundamental article of his own creed falters, and that pragmatism in teaching the efficiency of "our" thinking is saving idealism from its own unbelief.

From this lack of faith, idealism agrees with realism that *our* ideas can only algebraically represent or "mean" or "point at" a world of reality "beyond." The disagreement consists in the fact that while the realist's ideas are quite content with this rôle, the ideas of the idealist long to swallow, or be swallowed by, the rest of the world.

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DISCUSSION

A REPLY TO DR. BROWN

I FEEL compelled to say that one would obtain from Dr. Brown's discussion ("If the Blind Lead the Blind. A Comment on 'Logical Form' in Professor Perry's 'Realistic Program' ")¹ a very incorrect notion of the text on which he proposes to "comment." Dr. Brown's comment relates to somewhat less than one page, taken from one of three sections of an essay of thirty pages. The section to which Dr. Brown refers was entitled: "The Realistic Program of *Reform*," and not, as quoted, "The Realistic Program."² In the page referred to, a "regard for logical form" was recommended as one of eight rules of procedure that I believed calculated just now to improve the state of philosophy. And in connection with the matter of "logical form," I urged that the philosopher test his procedure by the canons of modern logic, and avail himself of the technical treatment to which modern logic has submitted certain fundamental concepts such as relation, infinity, etc. In view of these facts, I can scarcely be charged, as is certainly suggested by the title and trend of Dr. Brown's argument, with proposing that philosophy should be merged into logic or slavishly accept its lead.

I have urged attention to the recent work of the symbolic logicians, because it seems to me that these investigators are dealing in a highly abstract and technical way, in other words, in an *exact* way, with certain matters in which philosophy is necessarily involved.³

¹ This JOURNAL, Vol. VII., No. 18, p. 491.

² Still less was it "Professor Perry's Platform," as stated, probably through no fault of the author, on the title-page.

³ Dr. Brown's demonstration of the inconsistencies of the logicians is interesting, but it has, so far as I can see, no bearing on the present dispute, which concerns the importance of logic for philosophy. If these inconsistencies were really fatal to logic, then they would be fatal to logic as a "sub-